

**Commonwealth of Kentucky  
Environmental and Public Protection Cabinet  
Department for Environmental Protection  
Division for Air Quality  
803 Schenkel Lane  
Frankfort, Kentucky 40601  
(502) 573-3382**

**AIR QUALITY PERMIT  
Issued under 401 KAR 52:040**

**Permittee Name:** Felker Brothers  
**Mailing Address:** 125 Beaver Trail Road, Glasgow, KY 42141

**Source Name:** Felker Brothers  
**Mailing Address:** 125 Beaver Trail Road  
Glasgow, KY 42141

**Source Location:** Same as above

**Permit ID:** S-96-173 Revision 3  
**Agency Interest #:** 71  
**Activity ID:** APE20070001  
**Review Type:** Minor Source, Construction / Operating  
**Source ID:** 21-009-00064

**Regional Office:** Bowling Green Regional Office  
1508 Westen Avenue  
Bowling Green, KY 42104  
(270) 746-7475

**County:** Barren

**Application**  
**Complete Date:** March 2, 2007  
**Issuance Date:** October 11, 2001  
**Revision Date:** March 16, 2007  
**Expiration Date:** October 11, 2011



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**John S. Lyons, Director  
Division for Air Quality**

## **SECTION A - PERMIT AUTHORIZATION**

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:040, State-origin permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining other permits, licenses, or approvals that may be required by the Cabinet or other federal, state, or local agencies.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS****01 (T-2, T-3) Acid Pickling Tank, Immersion rinse tank, Water Treatment storage tanks.**

Control Equipment: One ESCO Plate Scrubber with control efficiency of 94%, 2000.

One C&E Custom Scrubber with control efficiency of 94%, 2006.

Construction commenced: December 1993.

**Description:** 12,193 gallons HF/HNO<sub>3</sub> pickling tank, followed by a 6,000-gallon immersion rinse tank slightly diluted with a mixture of HF/HNO<sub>3</sub>. Also includes 2-6,000 gallons storage tanks for Water Treatment Plant.

**APPLICABLE REGULATIONS:**

401 KAR 59:010, New process operations.

401 KAR 53:010, Ambient air quality standards

**1. Operating Limitations:**

The Scrubbers control devices shall be operated all the time when the Pickling Operation is operating.

**Compliance Demonstration:** Records shall be kept of the times when the units are operating but the control devices are not. Records shall also be kept of the maintenance activities.

**2. Emission Limitations:**

Visible emissions shall not equal or exceed 20% capacity.

Combined hydrofluoric acid emissions shall not exceed 0.02911 lb/hr based on a 24 hour average. (Combined with hydrofluoric acid tank emissions.)

Hydrofluoric acid emissions shall be calculated using the following equation:

$$\text{HF (emissions in lb/hr)} = \text{HF makeup rate (lb/hr from pickling tank)} * 0.05 * \text{weight percent of HF from MSDS} + \text{Rate of HF taken out of tank} * \text{weight percent of HF from MSDS} * \text{density of compound from MSDS}.$$

All particulate emissions shall not exceed 2.34 lb/hr.

Particulate emissions shall be calculated using the following equation:

$$\text{PE (emissions in lb/hr)} = \text{HF makeup rate (lb/hr)} * 0.05 * \text{weight percent of HF from MSDS} + \text{HNO}_3 \text{ makeup rate (lb/hr)} * 0.05 * \text{weight percent of HNO}_3 \text{ from MSDS}.$$

$$\text{PE for HNO}_3 \text{ tank (emissions in lb/hr)} = \text{HNO}_3 \text{ take out rate (gal/hr)} * 0.00728 \text{ lb/gal} * (1 - \text{control efficiency})$$

$$\text{PE for HF tank (emissions in lb/hr)} = \text{HF take out rate (gal/hr)} * 0.11359 \text{ lb/gal} * (1 - \text{control efficiency})$$

Nitric acid shall not exceed 12.41 tons/year for the entire source.

$$\text{Nitric acid tank (emissions in lb/hr)} = \text{HNO}_3 \text{ take out rate (gal/hr)} * 0.00728 \text{ lb/gal} * (1 - \text{control efficiency})$$

$$\text{Nitric acid immersion rinse tank (emissions in lb/hr)} = \text{HNO}_3 \text{ make up rate (lb/hr)} * 0.0375 \text{ (lb/lb)} * (1 - \text{control efficiency})$$

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

**3. Testing Requirements:**

None

**4. Monitoring Requirements:**

a. To provide reasonable assurance that the visible emission limitations are being met the permittee shall:

- I) Perform a semi-annually opacity reading, or more frequent if requested by the Division, from each stack or vent using Reference Method 9. Opacity readings shall be conducted while the emission units are in operation.
- II) Perform a monthly qualitative visual observation of the opacity of emissions from each stack/vent and maintain a log of the observation. The log shall note:
  - 1) Whether any air emissions (except for water vapor) were visible from the vent/stack; and
  - 2) All emission points from which visible emissions occurred.

III) Determine the opacity of emissions by Reference Method 9 if visible emission is observed.

b. The permittee shall monitor the amounts of HF and HNO<sub>3</sub> added to the pickling tank.

c. The permittee shall monitor the monthly amount of HNO<sub>3</sub> and HF taken out of the tank.

**5. Recordkeeping Requirements:**

The permittee shall maintain records of HF and HNO<sub>3</sub> usage rates and the appropriate MSDS. Records shall also be maintained of the quantitative visible emission readings and any corrective action taken.

**6. Reporting Requirements:**

The permittee shall report annually the compliance status of the facility.

The permittee shall report any exceedances in accordance with Section C.

**7. Specific Control Equipment Conditions:**

The facility shall maintain all control device equipment in accordance with the Preventative Maintenance Manufactory Plan.

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

**03 (05) Four Cut-off Saws**  
**03 Dust Collector**

Control Equipment: The Dust Collector has a control efficiency of 94%.  
Construction commenced: June 4, 1996

**Description:** Four Cut-off saws have attached dust collectors.

**Applicable Regulations:**

401 KAR 59:010, New process operations

**1. Operating Limitations:**

None

**2. Emission Limitations:**

Particulate emissions shall not exceed 2.34 lb/hr.

Particulate emissions shall be calculated using the following formula:

$$PE \text{ (in lb/hr)} = \text{Tons processed per hour} * \text{Emission inventory emission factor (1.052 lb/ton)} * (1 - \text{control efficiency}).$$

Visible emissions shall not equal or exceed 20% opacity.

Chromium emissions shall not exceed 0.582 lb/hr for the entire source.

$$\text{Chromium emissions (in lb/hr)} = \{(\text{welding material thruput (in tons/hr)} * \text{Emission inventory emission factory (0.006025 lb/ton)} * (1 - \text{control efficiency})) + (\text{welding material thruput (in tons/hr)} * \text{Emission inventory emission factory (2.062 lb/ton)} * (1 - \text{control efficiency}))\}$$

**3. Testing Requirements:**

None

**4. Monitoring Requirements:**

a. To provide reasonable assurance that the visible emission limitations are being met the permittee shall:

- I) Perform a semi-annually opacity reading, or more frequent if requested by the Division, from each stack or vent using Reference Method 9. Opacity readings shall be conducted while the emission units are in operation.
- II) Perform a monthly qualitative visual observation of the opacity of emissions from each stack/vent and maintain a log of the observation. The log shall note:
  - 1) Whether any air emissions (except for water vapor) were visible from the vent/stack; and
  - 2) All emission points from which visible emissions occurred.
- III) Determine the opacity of emissions by Reference Method 9 if visible emission is observed.

b. The permittee shall monitor the amounts of HF and HNO<sub>3</sub> added to the pickling tank.

c. The permittee shall monitor the monthly amount of HNO<sub>3</sub> and HF taken out of the tank.

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

**5. Recordkeeping Requirements:**

The permittee shall maintain records of the tons of tube processed and monthly visible emissions.

**6. Reporting Requirements:**

The permittee shall report annually the compliance status of the facility. The permittee shall report any exceedances in accordance with Section C(1).

**7. Specific Control Equipment Conditions:**

The facility shall maintain all control device equipment in accordance with the Preventative Maintenance Manufactory Plan.

## **SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

**04 (05) 20 TIG Welders**

**Description:** Control Equipment: None  
Construction commenced: June 4, 1996

### **Applicable Regulations:**

**401 KAR 59:010, New process operations**

**1. Operating Limitations:**

None

**2. Emission Limitations:**

Particulate emissions shall not exceed 2.34 lb/hr.

Particulate emissions shall be calculated using the following formula:

PE (in lb/hr) = Tons processed per hour \* Emission inventory emission factor (0.01193 lb/ton).

Visible emissions shall not equal or exceed 20% opacity.

Chromium emissions shall not exceed 0.582 lb/hr for the entire source.

Chromium emissions (in lb/hr) = {(welding material thruput (in tons/hr) \* Emission inventory emission factory (0.006025 lb/ton) \* (1-control efficiency)) + (welding material thruput (in tons/hr) \* Emission inventory emission factory (2.062 lb/ton) \* (1-control efficiency))}

**3. Testing Requirements:**

None

**4. Monitoring Requirements:**

a. To provide reasonable assurance that the visible emission limitations are being met the permittee shall:

I) Perform a semi-annually opacity reading, or more frequent if requested by the Division, from each stack or vent using Reference Method 9. Opacity readings shall be conducted while the emission units are in operation.

II) Perform a monthly qualitative visual observation of the opacity of emissions from each stack/vent and maintain a log of the observation. The log shall note:

1) Whether any air emissions (except for water vapor) were visible from the vent/stack; and

2) All emission points from which visible emissions occurred.

III) Determine the opacity of emissions by Reference Method 9 if visible emission is observed.

b. The permittee shall monitor the amounts of HF and HNO<sub>3</sub> added to the pickling tank.

c. The permittee shall monitor the monthly amount of HNO<sub>3</sub> and HF taken out of the tank.

**5. Recordkeeping Requirements:**

The permittee shall maintain records of the tons of tube processed and semi-annually qualitative visible emission readings.

**SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

**6. Reporting Requirements:**

The permittee shall report annually the compliance status of the facility. The permittee shall report any exceedances in accordance with Section C.

**7. Specific Control Equipment Conditions:**

None.



## SECTION C - GENERAL CONDITIONS

### 1. Administrative Requirements

- a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:040, Section 3(1)(b) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.
- b. This permit shall remain in effect for a fixed term of ten (10) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division. [401 KAR 52:040, Section 15]
- c. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-11 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- d. Pursuant to materials incorporated by reference by 401 KAR 52:040, this permit may be revised, revoked, reopened, reissued, or terminated for cause. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance shall not stay any permit condition [Section 1a-4, 5, of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- e. This permit does not convey property rights or exclusive privileges [Section 1a-8 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- f. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:040 Section 11(3)].
- g. This permit shall be subject to suspension at any time the permittee fails to pay all fees within 90 days after notification as specified in 401 KAR 50:038, Air emissions fee. The permittee shall submit an annual emissions certification pursuant to 401 KAR 52:040, Section 20.
- h. All previously issued permits to this source at this location are hereby null and void.

**SECTION C - GENERAL CONDITIONS (CONTINUED)****2. Recordkeeping Requirements**

- a. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of at least five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [401 KAR 52:040 Section 3(1)(f) and Section 1b-IV-2 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- b. The permittee shall perform compliance certification and recordkeeping sufficient to assure compliance with the terms and conditions of the permit. Documents, including reports, shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

**3. Reporting Requirements**

- a. (1) In accordance with the provisions of 401 KAR 50:055, Section 1, the permittee shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
  - i. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
  - ii. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
- (2) The permittee shall promptly report deviations from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Reporting Requirement condition a.(1) above), the probable cause of the deviation, and corrective or preventive measures taken; to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report [Section 1b-V-3 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- b. The permittee shall furnish information requested by the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the permit [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- c. Summary reports of monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation.

**SECTION C - GENERAL CONDITIONS (CONTINUED)**

The summary reports are due January 30th and July 30th of each year. All deviations from permit requirements shall be clearly identified in the reports. All reports shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

**4. Inspections**

In accordance with the requirements of 401 KAR 52:040, Section 3(1)(f) the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times. Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency:

- a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation.
- b. To access and copy any records required by the permit.
- c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit.
- d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

**5. Emergencies/Enforcement Provisions**

- a. The permittee shall not use as defense in an enforcement action, the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- b. An emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
  - (1) An emergency occurred and the permittee can identify the cause of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
  - (4) The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two working days after the time when emission limitations were exceeded due to the emergency and included a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
- c. Emergency provisions listed in General Condition 5.b are in addition to any emergency or upset provision contained in an applicable requirement [401 KAR 52:040, Section 22(1)].
- d. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [401 KAR 52:040, Section 22(2)].

**SECTION C - GENERAL CONDITIONS (CONTINUED)****6. Compliance**

- a. Periodic testing or instrumental or non-instrumental monitoring, which may consist of record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstration of continuing compliance with the conditions of this permit. For the purpose of demonstration of continuing compliance, the following guidelines shall be followed:
  - (1) Pursuant to 401 KAR 50:055, General compliance requirements, Section 2(5), all air pollution control equipment and all pollution control measures proposed by the application in response to which this permit is issued shall be in place, properly maintained, and in operation at any time an affected facility for which the equipment and measures are designed is operated, except as provided by 401 KAR 50:055, Section 1.
  - (2) All the air pollution control systems shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers. A log shall be kept of all routine and nonroutine maintenance performed on each control device. Daily observations are required during daylight hours of all operations, control equipment and any visible emissions to determine whether conditions appear to be either normal or abnormal. If the operations, controls and/or emissions appear to be abnormal, the permittee must then comply with the requirements of Section C – General Conditions, 3.a.(2), of this permit.
  - (3) A log of the monthly raw material consumption and monthly production rates shall be kept available at the facility. Compliance with the emission limits may be demonstrated by computer program, spread sheets, calculations or performance tests as may be specified by the Division [401 KAR 50:055, Section 2].
- b. Pursuant to 401 KAR 52:040, Section 19, the permittee shall certify compliance with the terms and conditions contained in this permit by January 30th of each year, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Regional Office listed on the front of this permit in accordance with the following requirements:
  - (1) Identification of the term or condition;
  - (2) Compliance status of each term or condition of the permit;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The method used for determining the compliance status for the source, currently and over the reporting period, and
  - (5) For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

**SECTION C - GENERAL CONDITIONS (CONTINUED)**

- (6) The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following addresses:

Division for Air Quality  
Bowling Green Regional Office  
1508 Western Avenue  
Bowling Green, KY 42104

Division for Air Quality  
Central Files  
803 Schenkel Lane  
Frankfort, KY 40601-1403

- c. Permit Shield - A permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with all:
- (1) Applicable requirements that are included and specifically identified in this permit; or
  - (2) Non-applicable requirements expressly identified in this permit [401 KAR 52:040, Section 11].

**7. Construction Requirements:**

No construction in this permit.

**SECTION D - INSIGNIFICANT ACTIVITIES**

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:040, Section 6. While these activities are designated as insignificant the permittee shall comply with the applicable regulation and any level of periodic monitoring specified below.

<u>Description</u>	<u>Generally Applicable Regulation</u>
1. Hand grinding	N/A
2. Ink Jet Printing	N/A
3. Process Heater Boiler (1.1 MMBtu)	KAR 59:015